



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,786	01/17/2002	Koichi Uchiyama	KAW 2 0102	1542

7590

12/08/2003

Richard J. Minnich, Esq.
Fay, Sharpe, Fagan, Minnich & McKee, LLP
Seventh Floor
1100 Superior Avenue
Cleveland, OH 44114-2518

EXAMINER

LORENZO, JERRY A

ART UNIT	PAPER NUMBER
----------	--------------

1734

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,786

Applicant(s)

UCHIYAMA, KOICHI

Examiner

Jerry A. Lorengo

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 . 6) ☐ Other: _____

DETAILED ACTION

(1)

Election/Restrictions

Applicant's election without traverse of Group I, claims 1-6 and 15-18 in the Paper filed October 20, 2003.

(2)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,550,660 to Sato et al.

Regarding applicant claim 1, Sato et al. disclose a stencil sheet comprising:

(1) A sheet having a large number of minute perforations (a 270 mesh polyester screen) which are filled with a resin that is soluble in a solvent (column 5, line 60 to column 6, line 9).

(3)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 1734

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,550,660 to Sato et al. in view of U.S. Patent No. 3,981,237 to Rhodes.

Although Sato et al. disclose that the stencil sheet may comprise a 270-mesh screen formed of polyester (a synthetic resin), they do not specifically disclose, as per applicant claim 2, that it comprises a film of synthetic resin.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to substitute the polyester mesh screen of Sato et al. with a perforated film of synthetic resin motivated by the fact that Rhodes, also drawn to screen printing devices, discloses that mesh screens may be replaced with perforated films of synthetic resin in order to produce a device with enhanced resistance to damage (column 1, line 15 to column 3, line 64).

(3)

Claim 3 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 4,550,660 to Sato et al.

Sato et al. disclose that the sheet having a large number of minute perforations comprises a 270 mesh polyester screen. Given the mesh size disclosed by Sato et al., a standard 270-mesh polyester screen would inherently have an open area of between 26.6 and 35.2% and have an equivalent circular diameter of between 45 and 54 μ m.

In the alternative, it would have been obvious to one of ordinary skill in the art at the time of invention that the 270 mesh polyester screen disclosed by Sato et al. would have the physical parameters set forth in applicant claim 3 motivated by the fact that generally available technical specifications provide that a 270 mesh polyester screen formed of low elongation monofilament polyester possesses an open area of between 26.6 and 35.2% and have an equivalent circular diameter of between 45 and 54 μ m.

(4)

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (3), above, in view of JP 03-75192 to Tamura.

Art Unit: 1734

Although the references as combined in section (3), above, disclose a stencil sheet comprising a film having minute perforations filled with a resin which is soluble in a solvent, they do not specifically disclose that the perforations in the sheet are trapezoidal in vertical cross section.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the film resulting from the references as combined in section (3), above, with perforations that are trapezoidal in vertical cross section motivated by the fact that Tamura, also drawn to screen printing devices, disclose that the provision of a screen printing mask (a stencil sheet) with trapezoidal perforations allows materials forced therethrough during printing to be disposed on the substrate in stable deposits without adherence to the walls of the perforations (abstract; Figures 1 and 3).

(5)

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al.

Sato et al. disclose a stencil sheet comprising a sheet having a large number of minute perforations (a 270 mesh polyester screen) which are filled with a resin that is soluble in a solvent (column 5, line 60 to column 6, line 9).

Although Sato et al. do not specifically disclose that the sheet has a thickness in the range of 1.5 to 20 microns, the skilled artisan would have appreciated the fact that the thickness of the sheet, such as the 270 mesh polyester screen disclosed by Sato et al., would be dependent upon the diameter of the polyester filaments used to weave the mesh as well as the degree of post-weave calendaring (which is used to cross-weld the weave) that the polyester mesh undergoes after manufacture.

(6)

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,550,660 to Sato et al. in view of U.S. Patent No. 5,819,652 to Utter et al.

Sato et al. disclose a stencil sheet comprising a sheet having a large number of minute perforations (a 270 mesh polyester screen) which are filled with a resin that is soluble in a solvent (column 5, line 60 to column 6, line 9).

Although Sato et al. do not specifically disclose that the stencil sheet further comprises a porous support laminated on one side of the sheet, it would have been obvious to one of ordinary

Art Unit: 1734

skill in the art at the time of invention to provide the sheet of Sato et al. with a porous support on one side thereof motivated by the fact that Utter et al., also drawn to screen printing devices, disclose that it is known to provide a stencil mask 2 with a porous support (mesh) 10 on one side thereof (Figures 1 and 2; column 2, lines 41-63).

(7)

Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (3), above, in view of JP 03-75192 to Tamura.

Although the references as combined in section (3), above, disclose a stencil sheet comprising a synthetic resin film having minute perforations filled with a resin which is soluble in a solvent, they do not specifically disclose that the perforations in the sheet are trapezoidal in vertical cross section.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the synthetic resin film resulting from the references as combined in section (3), above, with perforations that are trapezoidal in vertical cross section motivated by the fact that Tamura, also drawn to screen printing devices, disclose that the provision of a screen printing mask (a stencil sheet) with trapezoidal perforations allows materials forced therethrough during printing to be disposed on the substrate in stable deposits without adherence to the walls of the perforations (abstract; Figures 1 and 3).

(8)

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over over the references as combined in section (3), above, in view of U.S. Patent No. 5,819,652 to Utter et al.

Sato et al. and Rhodes, as combined in section (3), above, disclose a stencil sheet comprising a synthetic resin film sheet having a large number of minute perforations which are filled with a resin that is soluble in a solvent.

Although they do not specifically disclose that the stencil sheet further comprises a porous support laminated on one side of the sheet, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the sheet with a porous support on one side thereof motivated by the fact that Utter et al., also drawn to screen printing devices, disclose that it is known to provide a stencil mask 2 with a porous support (mesh) 10 on one side thereof (Figures 1 and 2; column 2, lines 41-63).

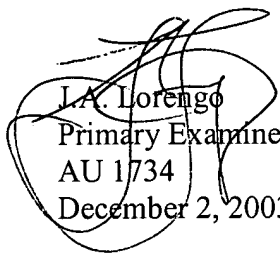
Art Unit: 1734

(9)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (703) 306-9172. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. Please note that after December 18, 2003 the examiner can be reached at (571) 272-1233. This change is due to the relocation of Patent Office facilities to a new campus. Also note that all patent application related correspondence transmitted by FAX must be directed to the central FAX number at 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



J.A. Lorengo
Primary Examiner
AU 1734
December 2, 2003